Amendments to the Claims

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims

1. (Previously presented) A method for selecting a yeast host cell that expresses a desired antibody or antibody fragment from a plurality of yeast host cells expressing candidate antibodies or antibody fragments, the method comprising the steps of:

(a) obtaining a library of vectors that encode a plurality of distinct candidate antibodies or antibody fragments, wherein said vector provides for the cell surface expression of said candidate antibodies or antibody fragments;

(b) expressing each of said plurality of candidate antibodies or antibody fragments on the surface of said plurality of yeast host cells; and

(c) selecting a yeast host cell that expresses a desired antibody or antibody fragment.

2-5. (Canceled)

6. (Previously presented) The method of claim 1, wherein selecting a yeast host cell that expresses a desired antibody comprises the steps of:

(a) contacting said antibody- or antibody fragment-expressing cells with a selected antigen; and

(b) identifying a yeast host cell that binds to said selected antigen.

7. (Original) The method of claim 6, wherein the antigen is labeled.

8. (Original) The method of claim 7, wherein the label is a fluorescent or chemilluminescent label.

9. (Previously presented) The method of claim 6, wherein said selected antigen is located on the surface of a cell other than said plurality of yeast host cells, and selecting a yeast host cell that binds to said selected antigen comprises the steps of:

(a) contacting said plurality of yeast host cells with said cell expressing or having conjugated thereto said selected antigen; and

(b) identifying a yeast host cell bound to said cell expressing or having conjugated thereto said selected antigen.

10. (Previously presented) The method of claim 9, further comprising size sorting of cells bound in step (b).

11. (Previously presented) The method of claim 6, wherein said vector library is obtained by a method comprising the steps of:

(a) administering to an animal an immunologically effective amount of a composition comprising a selected antigen;

(b) obtaining from the animal a plurality of distinct DNA segments that encode distinct antibodies or antibody fragments; and

(c) incorporating said plurality of DNA segments into a plurality of expression vectors, the vectors expressing antibodies or antibody fragments on the outer membrane surface of said plurality of yeast host cells.

12. (Original) The method of claim 11, wherein said plurality of DNA segments are obtained by a method comprising the steps of:

(a) isolating mRNA from antibody-producing cells of said animal;

(b) amplifying a plurality of distinct RNA segments using a set of nucleic acid primers having sequences complementary to antibody constant region or antibody framework region nucleic acid sequences; and

(c) preparing a plurality of distinct DNA segments having sequences complementary to said amplified RNA segments.

13-14. (Canceled)

15. (Previously presented) The method of claim 1, wherein a cell that expresses a desired antibody or antibody fragment is subjected to cleavage to release the antibody or antibody fragment from the surface of the outer membrane.

16-17. (Canceled)

18. (Previously presented) The method of claim 6, wherein said selected antigen is linked to a fluorescent label, a chemilluminescent label, a radioactive label, biotin, avidin, a magnetic bead or an enzyme that generates a colored product upon contact with a chromogenic substrate.

19. (Previously presented) The method of claim 18, wherein identifying a yeast host cell that binds to said selected antigen comprises the steps of:

(a) contacting said plurality of yeast host cells with said detectably labeled antigen under conditions effective to allow specific antigen-antibody binding;

(b) removing non-specifically bound antigen from said yeast host cells; and

(c) identifying a yeast host cell that binds to said selected antigen by detecting the presence of the bound detectable label.

20. (Previously presented) The method of claim 19, wherein said yeast host cell that binds to said selected antigen is identified by a method comprising the steps of:

(a) contacting said plurality of yeast host cells with a fluorescently labeled antigen under conditions effective to allow specific antigen-antibody binding;

(b) subjecting said yeast host cells to automated cell sorting; and

(c) identifying a yeast host cell that expresses an antibody or antibody fragment that binds to said selected antigen by detecting the fluorescently labeled sorted cells.

21. (Previously presented) The method of claim 20, wherein step (b) comprises sorting by flow cytometry.

22. (Previously presented) The method of claim 20, further comprising a second round of automated cell sorting.

23. (Original) The method of claim 22, wherein regrowth of sorted cells is conducted between said first and said second rounds of cell sorting.

24. (Previously presented) The method of claim 22, further comprising a third and a fourth round of automated cell sorting.

25. (Original) The method of claim 18, wherein said selected antigen is linked to a magnetic bead.

26. (Previously presented) The method of claim 25, wherein a yeast host cell the expresses an antibody or antibody fragments that binds said antigen are selected are identified by a method comprising the steps of:

(a) contacting said plurality of yeast host cells with said magnetic bead labeled antigen under conditions effective to allow specific antigen-antibody binding;

(b) subjecting said plurality of yeast host cells to magnetic sorting; and

(c) identifying a yeast host cell expressing said desired antibody- or antibody fragment by detecting the magnetic bead labeled sorted cells.

27-46. (Canceled)